CROP PLANNING GUIDE 2013

AGRICULTURE

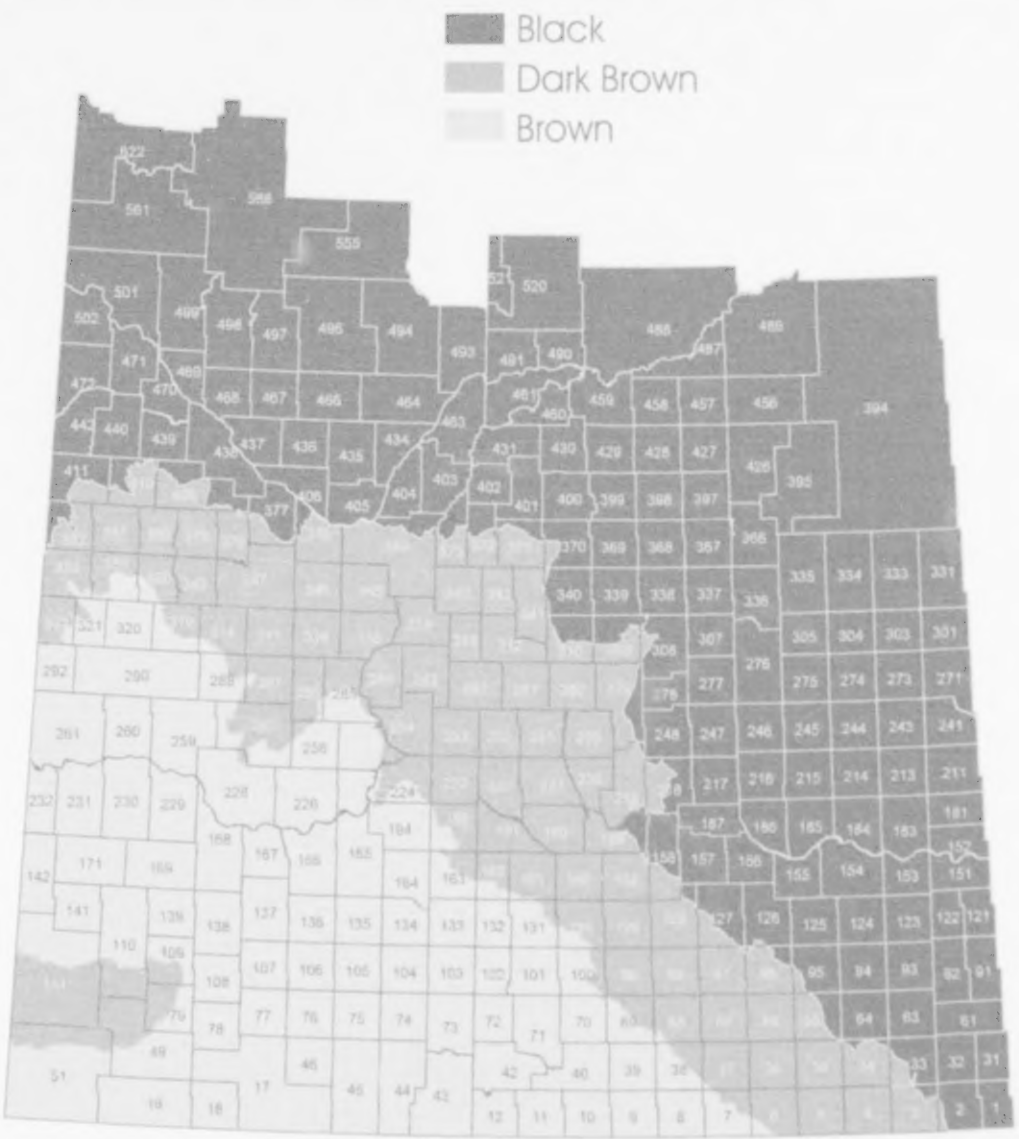
FARM MANAGEMENT

Saskatchewan
Ministry of
Agriculture

CROP PLANNING GUIDE 2013

Each year, the Saskatchewan Ministry of Agriculture prepares the Crop Planning Guide to help producers estimate their costs of producing various crops.

Please remember that the Guide is an estimate and does not represent actual provincial average cost of production figures. The figures are meant to be used as a guide. Farm managers should use their own costs of production because costs and yields on each farm differ due to the type and amount of equipment, the amount of chemical and fertilizer used, and the various agronomic practices used. Blank worksheets are provided at the end of the Guide for this purpose. For those who would prefer, a downloadable spreadsheet is available on the Ministry website at www.agriculture.gov.sk.ca (located in the Farm Management area, Production Economics, entitled "Crop Planner").



GENERAL ASSUMPTIONS FOR ALL SOIL ZONES

1. Crop prices are based on information obtained as of early December 2012. Prices become outdated very quickly. Producers must continually adjust these figures as seeding approaches.

2. Crop yields are increased by 20 per cent above long-term Saskatchewan Crop Insurance Corporation (SCIC) area yield. Feed barley yields are increased an additional 20 per cent over malt barley yields. Crop yields are increased to reflect a higher level of management and higher input levels.

3. Fertilizer: Nitrogen costs are based on 46-0-0 at $605/tonne or $0.60/lb.; Phosphorus costs are based on 11-52-0 at $713/tonne or $0.50/lb.; Sulphur costs are based on 21-0-0-24 at $487/tonne or $0.40/lb. These prices can vary dramatically as spring approaches and producers are reminded to continually adjust these figures as seeding approaches.

4. Chemicals: Pesticide costs are set using Suggested Retail Price (SRP) costs as well as full rate application. Weeds, insects and diseases being controlled vary significantly from farm to farm and from soil zone to soil zone. The assumptions used are only to create a general cost for the guide. Producers must use their own costs based on the weed, insect and disease pressures they are controlling. Prices can also vary significantly from SRP rates.

5. Machinery operating costs: Fuel costs are based on estimated fuel consumptions for the various farming operations with diesel fuel priced at $1.00/litre. **Machinery repair** rates are four per cent of machinery investment per year for pulse crops, flax and sunflowers, and three per cent for all other crops.

6. Custom work and hired labour is made up of costs for custom farm operations, such as custom trucking and custom spraying. Skilled labour is assumed to be $20.00 per hour for 2013.

7. Crop Insurance premiums are based on the yield levels used at a coverage level of 70 per cent.

8. Utilities are made up of electricity, natural gas, water and telephone. This category has increased by 2.7 per cent for 2013.

9. Interest on variable expenses: Operating interest is calculated on all variable expenses at 4.2 per cent for six months, 18 months for fallow.

10. Building repair rates are two per cent of building investment per acre.

11. Business overhead is made up of legal, accounting, insurance, licenses and miscellaneous. This category is up 1.5 per cent for 2013.

12. Machinery depreciation is calculated at 10 per cent of machinery investment per year on a straight-line basis.

13. Building depreciation is calculated at five per cent per year on a straight line basis of building investment.

14. Machinery investment is calculated at a 3.25 per cent return on investment. It is assumed that a Brown Soil Zone farm has $178.27 per cultivated acre invested in machinery; a Dark Brown Soil Zone farm has $207.21 per cultivated acre invested in machinery; and a Black Soil Zone farm has $238.47 per cultivated acre invested in machinery. Chem fallow has only a portion of the machinery cost attributed to it. An additional machinery investment of $63 per acre is assumed for pulses and some specialty crops.

15. Building investment cost is calculated at a three per cent return on investment. It is assumed that a Brown Soil Zone farm has $20 per cultivated acre invested in buildings; a Dark Brown Soil Zone farm has $26 per cultivated acre invested in buildings; and a Black Soil Zone farm has $35 per cultivated acre invested in buildings.

16. Land investment cost is calculated at a 4.1 per cent return on investment of $480 per cultivated acre in the Brown Soil Zone; $583 per cultivated acre in the Dark Brown Soil Zone; and $643 per cultivated acre in the Black Soil Zone.

17. Labour and management: These budgets do not include an estimate for owner/operator labour and management. This value varies greatly and farm managers need to determine their own actual labour and management cost.

BROWN SOIL ZONE 2013

1. Seed price and seeding rate:

	Rate	Price
Spring Wheat	1.5 bu./ac	$10.50/bu.
Durum Wheat	1.5 bu./ac.	$11.00/bu.
CPS Wheat	1.5 bu./ac	$10.00/bu.
Malt Barley	1.9 bu./ac.	$7.00/bu.
Feed Barley	1.9 bu./ac	$6.75/bu.
Oats	2.4 bu./ac	$5.00/bu.
Large Green Lentils	90 lb./ac.	$0.26/lb.
Red Lentils	45 lb./ac/	$0.32/lb.
Edible Yellow Peas	3.0 bu./ac	$11.00/bu.
Edible Green Peas	3.0 bu./ac.	$14.30/bu.
Flax	30 lb./ac.	$18.00/bu.
HT Canola	5 lb./ac	$11.50/lb.

2. Fertilizer:

Fallow Crops:

	lb./ac.		
	N	P	S
Spring Wheat	30	30	0
Durum Wheat	30	30	0
CPS Wheat	30	30	0
Malt Barley	25	30	0
Feed Barley	35	30	0
Oats	30	30	0
Flax	20	15	0
HT Canola	30	30	20

Stubble Crops:

	lb./ac.		
	N	P	S
Spring Wheat	55	30	0
Durum Wheat	55	30	0
CPS Wheat	55	30	0
Malt Barley	50	30	0
Feed Barley	60	30	0
Oats	55	30	0
Large Green Lentils	6	20	0
Red Lentils	6	20	0
Feed Peas	6	20	0
Edible Green Peas	6	20	0
Flax	50	20	0
HT Canola	60	30	20

	Fallow Seeded Crops					
	Chem Fallow	Spring Wheat	Durum Wheat	CPS Wheat	Malt Barley	Feed Barley
REVENUE PER ACRE						
Estimated Yield (bu./ac.,lb./ac.) (A)		36.1	40.1	44.6	56.3	67.5
Estimated on Farm Market Price/bu.,lb. (B)		7.15	7.35	6.80	5.40	4.50
Estimated Gross Revenue/ac (AxB)=(C)		**258.12**	**294.74**	**303.28**	**304.02**	**303.75**
EXPENSES PER ACRE						
Variable Expenses/acre						
Seed		15.75	16.50	15.00	13.30	12.83
Fertilizer - Nitrogen		18.00	18.00	18.00	15.00	21.00
- Phosphorus		15.00	15.00	15.00	15.00	15.00
- Sulphur and Other		0.00	0.00	0.00	0.00	0.00
Chemical - Herbicides	11.74	13.75	13.75	13.75	12.84	12.84
- Insecticides/Fungicides	0.00	1.91	1.91	1.91	0.00	0.00
- Seed Treatments/Innoculants	0.00	4.31	4.31	4.31	4.36	4.36
Machinery Operating - Fuel	2.00	17.00	17.00	17.00	17.00	17.00
- Repair	1.26	5.35	5.35	5.35	5.35	5.35
Custom Work and Hired Labour	0.00	17.50	17.50	17.50	16.00	16.00
Crop Insurance Premium	0.00	7.17	9.14	11.15	12.69	12.69
Utilities and Miscellaneous	5.47	5.47	5.47	5.47	5.47	5.47
Interest on Variable Expenses	1.29	2.55	2.60	2.61	2.46	2.57
Total Variable Expenses (D)	**21.76**	**123.76**	**126.53**	**127.05**	**119.47**	**125.11**
Other Expenses/acre						
Building Repair	0.40	0.40	0.40	0.40	0.40	0.40
Property Taxes	5.27	5.27	5.27	5.27	5.27	5.27
Business Overhead	1.54	1.54	1.54	1.54	1.54	1.54
Machinery Depreciation	4.20	17.83	17.83	17.83	17.83	17.83
Building Depreciation	1.00	1.00	1.00	1.00	1.00	1.00
Machinery Investment	1.37	5.79	5.79	5.79	5.79	5.79
Building Investment	0.60	0.60	0.60	0.60	0.60	0.60
Land Investment	19.69	19.69	19.69	19.69	19.69	19.69
Total Other Expenses (E)	**34.07**	**52.12**	**52.12**	**52.12**	**52.12**	**52.12**
Labour & Management (F)						
Total Expenses (D+E+F)=(G)	**55.83**	**175.88**	**178.65**	**179.17**	**171.59**	**177.23**
Summer Fallow Expense (H)		55.83	55.83	55.83	55.83	55.83
Total Rotation Expense (G+H)=(I)		**231.71**	**234.48**	**235.00**	**227.42**	**233.06**
RETURN PER ACRE*						
Return Over Variable Expenses (C-D)		**112.60**	**146.45**	**154.47**	**162.79**	**156.88**
Return Over Total Rotation Expenses (C-I)		**26.41**	**60.26**	**68.28**	**76.60**	**70.69**
BREAK-EVEN YIELD PER ACRE*						
To Cover Variable Expenses		**20.35**	**20.18**	**21.88**	**26.15**	**32.64**
To Cover Total Rotation Expenses		**32.41**	**31.90**	**34.56**	**42.11**	**51.79**
BREAK-EVEN PRICE PER BU./LB.*						
To Cover Variable Expenses		**4.03**	**3.70**	**3.34**	**2.51**	**2.18**
To Cover Total Rotation Expenses		**6.42**	**5.85**	**5.27**	**4.04**	**3.45**

*Returns per acre, break-even yields and prices for fallow crops must include the previous year's fallow expenses. For simplicity, we used 2013 (i.e. forecast) chem fallow values.

			Stubble Seeded Crops											
Oats	Flax	Canola	Spring Wheat	Durum Wheat	CPS Wheat	Malt Barley	Feed Barley	Oats	Large Green Lentil	Red Lentil	Edible Yellow Peas	Edible Green Pea	Flax	Canola
60.8	22.7	30.8	30.9	33.6	34.1	45.2	54.3	48.1	1255.2	1357.2	32.0	32.0	17.3	23.2
2.90	12.60	12.00	7.15	7.35	6.80	5.40	4.50	2.90	0.24	0.20	8.50	9.50	12.60	12.00
176.32	286.02	369.60	220.94	246.96	231.88	244.08	244.35	139.49	301.25	271.44	272.00	304.00	217.98	278.40
12.00	9.64	57.50	15.75	16.50	15.00	13.30	12.83	12.00	23.40	14.40	33.00	42.90	9.64	57.50
18.00	12.00	18.00	33.00	33.00	33.00	30.00	36.00	33.00	3.60	3.60	3.60	3.60	30.00	36.00
15.00	7.50	15.00	15.00	15.00	15.00	15.00	15.00	15.00	10.00	10.00	10.00	10.00	10.00	15.00
0.00	0.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.00
9.84	13.66	17.13	14.23	14.23	14.23	13.32	13.32	10.32	31.00	31.00	19.13	19.13	15.66	19.13
0.00	0.00	3.08	1.91	1.91	1.91	0.00	0.00	0.00	12.18	12.18	0.60	0.60	0.00	3.08
3.42	2.00	0.00	4.31	4.31	4.31	4.36	4.36	3.42	11.58	9.41	12.45	12.45	2.00	0.00
17.00	17.00	18.00	17.00	17.00	17.00	17.00	17.00	17.00	19.00	19.00	19.00	19.00	17.00	18.00
5.35	7.13	5.35	5.35	5.35	5.35	5.35	5.35	5.35	9.65	9.65	9.65	9.65	7.13	5.35
16.00	16.00	16.25	17.50	17.50	17.50	16.00	16.00	16.00	17.00	17.00	15.50	15.50	16.00	16.25
12.05	24.20	27.08	6.12	7.65	8.50	10.12	10.12	9.50	22.15	18.49	12.37	12.37	18.37	21.16
5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47
2.40	2.41	4.01	2.85	2.90	2.88	2.73	2.84	2.67	3.47	3.15	2.96	3.16	2.76	4.30
116.53	117.01	194.87	138.49	140.82	140.15	132.65	138.29	129.73	168.50	153.35	143.73	153.83	134.03	209.24
0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
5.27	5.27	5.27	5.27	5.27	5.27	5.27	5.27	5.27	5.27	5.27	5.27	5.27	5.27	5.27
1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54
17.83	17.83	17.83	17.83	17.83	17.83	17.83	17.83	17.83	24.13	24.13	24.13	24.13	17.83	17.83
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	7.84	7.84	7.84	7.84	5.79	5.79
0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
19.69	19.69	19.69	19.69	19.69	19.69	19.69	19.69	19.69	19.69	19.69	19.69	19.69	19.69	19.69
52.12	52.12	52.12	52.12	52.12	52.12	52.12	52.12	52.12	60.47	60.47	60.47	60.47	52.12	52.12
168.65	169.13	246.99	190.61	192.94	192.27	184.77	190.41	181.85	228.97	213.82	204.20	214.30	186.15	261.36
55.83	55.83	55.83												
224.48	224.96	302.82	190.61	192.94	192.27	184.77	190.41	181.85	228.97	213.82	204.20	214.30	186.15	261.36
38.03	147.25	152.97	82.45	106.14	91.73	111.43	106.06	9.76	132.75	118.09	128.27	150.17	83.95	69.16
-48.16	61.06	66.78	30.33	54.02	39.61	59.31	53.94	-42.36	72.28	57.62	67.80	89.70	31.83	17.04
47.69	11.01	18.05	19.37	19.16	20.61	24.56	30.73	44.73	702.08	766.75	16.91	16.19	10.64	17.44
77.41	17.85	25.24	26.66	26.25	28.28	34.22	42.31	62.71	954.04	1069.10	24.02	22.56	14.77	21.78
2.27	6.11	7.03	4.48	4.19	4.11	2.93	2.55	2.70	0.13	0.11	4.49	4.81	7.75	9.02
3.69	9.91	9.83	6.17	5.74	5.64	4.09	3.51	3.78	0.18	0.16	6.38	6.70	10.76	11.27

DARK BROWN SOIL ZONE 2013

1. Seed price and seeding rate:

	Rate	Price
Spring Wheat	1.6 bu./ac	$10.50/bu.
Durum Wheat	1.6 bu./ac.	$11.00/bu.
CPS Wheat	1.6 bu./ac	$10.00/bu.
Malt Barley	2.0 bu./ac.	$7.00/bu.
Feed Barley	2.0 bu./ac	$6.75/bu.
Oats	2.6 bu./ac	$5.00/bu.
Large Green Lentils	90 lb./ac.	$0.26/lb.
Red Lentils	45 lb./ac/	$0.32/lb.
Edible Yellow Peas	3.0 bu./ac	$11.00/bu.
Edible Green Peas	3.0 bu./ac.	$14.30/bu.
Flax	35 lb./ac.	$18.00/bu.
HT Canola	5 lb./ac	$11.50/lb.

2. Fertilizer:

Fallow Crops:

	lb./ac.		
	N	P	S
Spring Wheat	35	30	0
Durum Wheat	35	30	0
CPS Wheat	35	30	0
Malt Barley	30	30	0
Feed Barley	40	30	0
Oats	35	30	0
Flax	25	15	0
HT Canola	35	30	20

Stubble Crops:

	lb./ac.		
	N	P	S
Spring Wheat	60	30	0
Durum Wheat	60	30	0
CPS Wheat	60	30	0
Malt Barley	55	30	0
Feed Barley	65	30	0
Oats	60	30	0
Large Green Lentils	6	20	0
Red Lentils	6	20	0
Feed Peas	6	20	0
Edible Green Peas	6	20	0
Flax	55	20	0
HT Canola	65	30	20

		Fallow Seeded Crops				
	Chem Fallow	Spring Wheat	Durum Wheat	CPS Wheat	Malt Barley	Feed Barley
REVENUE PER ACRE						
Estimated Yield (bu./ac. /lb./ac.) (A)		35.4	41.0	44.8	56.3	67.6
Estimated on Farm Market Price/bu./lb. (B)		7.15	7.35	6.80	5.40	4.50
Estimated Gross Revenue/ac. (AxB)=(C)		**253.11**	**301.35**	**304.64**	**304.02**	**304.20**
EXPENSES PER ACRE						
Variable Expenses/acre						
Seed		16.80	17.60	16.00	14.00	13.50
Fertilizer - Nitrogen		21.00	21.00	21.00	18.00	24.00
- Phosphorus		15.00	15.00	15.00	15.00	15.00
- Sulphur and Other		0.00	0.00	0.00	0.00	0.00
Chemical - Herbicides	11.74	16.14	16.14	16.14	14.28	14.28
- Insecticides/Fungicides	0.00	1.53	1.53	1.53	0.00	0.00
- Seed Treatments/Innoculants	0.00	4.60	4.60	4.60	4.58	4.58
Machinery Operating - Fuel	2.00	17.00	17.00	17.00	17.00	17.00
- Repair	1.73	6.22	6.22	6.22	6.22	6.22
Custom Work and Hired Labour	0.00	17.25	17.25	17.25	16.25	16.25
Crop Insurance Premium	0.00	7.25	9.94	10.86	11.81	11.81
Utilities and Miscellaneous	5.88	5.88	5.88	5.88	5.88	5.88
Interest on Variable Expenses	1.35	2.70	2.78	2.76	2.58	2.70
Total Variable Expenses (D)	**22.70**	**131.37**	**134.94**	**134.24**	**125.60**	**131.22**
Other Expenses/acre						
Building Repair	0.52	0.52	0.52	0.52	0.52	0.52
Property Taxes	5.95	5.95	5.95	5.95	5.95	5.95
Business Overhead	2.35	2.35	2.35	2.35	2.35	2.35
Machinery Depreciation	5.78	20.72	20.72	20.72	20.72	20.72
Building Depreciation	1.31	1.31	1.31	1.31	1.31	1.31
Machinery Investment	1.88	6.73	6.73	6.73	6.73	6.73
Building Investment	0.78	0.78	0.78	0.78	0.78	0.78
Land Investment	23.88	23.88	23.88	23.88	23.88	23.88
Total Other Expenses (E)	**42.45**	**62.24**	**62.24**	**62.24**	**62.24**	**62.24**
Labour & Management (F)						
Total Expenses (D+E+F)=(G)	**65.15**	**193.61**	**197.18**	**196.48**	**187.84**	**193.46**
Summer Fallow Total Cost (H)		65.15	65.15	65.15	65.15	65.15
Total Rotation Expense (G+H)=(I)		**258.76**	**262.33**	**261.63**	**252.99**	**258.61**
RETURN PER ACRE*						
Return Over Variable Expenses (C-D)		**99.04**	**143.71**	**147.70**	**155.72**	**150.28**
Return Over Total Rotation Expenses (C-I)		**-5.65**	**39.02**	**43.01**	**51.03**	**45.59**
BREAK-EVEN YIELD PER ACRE*						
To Cover Variable Expenses		**21.55**	**21.45**	**23.08**	**27.46**	**34.20**
To Cover Total Rotation Expenses		**36.19**	**35.69**	**38.48**	**46.85**	**57.47**
BREAK-EVEN PRICE PER BU./LB.*						
To Cover Variable Expenses		**4.35**	**3.84**	**3.50**	**2.63**	**2.28**
To Cover Total Rotation Expenses		**7.31**	**6.40**	**5.84**	**4.49**	**3.83**

*Returns per acre, break-even yields and prices for fallow crops must include the previous year's fallow expenses. For simplicity, we used 2013 (i.e forecast) chem fallow values.

			Stubble Seeded Crops										
Oats	Flax	Canola	Spring Wheat	Durum Wheat	CPS Wheat	Malt Barley	Feed Barley	Oats	Large Green Lentil	Red Lentil	Edible Yellow Peas	Edible Green Pea	Flax	Canola
67.0	23.2	34.9	35.3	41.0	43.3	56.3	67.6	62.9	1426.8	1524.0	37.1	37.1	22.8	34.9
2.90	12.60	12.00	7.15	7.35	6.80	5.40	4.50	2.90	0.24	0.20	8.50	9.50	12.60	12.00
194.30	**292.32**	**418.80**	**252.40**	**301.35**	**294.44**	**304.02**	**304.20**	**182.41**	**342.43**	**304.80**	**315.35**	**352.45**	**287.28**	**418.80**
13.00	11.25	57.50	16.80	17.60	16.00	14.00	13.50	13.00	23.40	14.40	33.00	42.90	11.25	57.50
21.00	15.00	21.00	36.00	36.00	36.00	33.00	39.00	36.00	3.60	3.60	3.60	3.60	33.00	39.00
15.00	7.50	15.00	15.00	15.00	15.00	15.00	15.00	15.00	10.00	10.00	10.00	10.00	10.00	15.00
0.00	0.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.00
14.28	12.14	23.04	18.23	18.23	18.23	16.37	16.37	16.37	31.00	31.00	19.13	19.13	14.14	19.13
0.00	0.00	3.08	1.53	1.53	1.53	0.00	0.00	0.00	12.18	12.18	0.60	0.60	0.00	3.08
3.71	2.33	0.00	4.60	4.60	4.60	4.58	4.58	3.71	11.58	9.41	12.45	12.45	2.33	0.00
17.00	17.00	18.00	17.00	17.00	17.00	17.00	17.00	17.00	19.00	19.00	19.00	19.00	17.00	18.00
6.22	8.29	6.22	6.22	6.22	6.22	6.22	6.22	6.22	10.81	10.81	10.81	10.81	8.29	6.22
16.25	16.25	16.25	17.25	17.25	17.25	16.25	16.25	16.25	16.25	16.25	15.50	15.50	16.25	16.25
11.70	15.29	22.24	7.24	9.94	10.54	11.81	11.81	11.02	24.62	20.18	11.23	11.23	15.10	22.24
5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88
2.60	2.33	4.12	3.06	3.13	3.11	2.94	3.06	2.95	3.53	3.21	2.97	3.17	2.80	4.42
126.64	**113.26**	**200.33**	**148.81**	**152.38**	**151.36**	**143.05**	**148.67**	**143.40**	**171.85**	**155.92**	**144.17**	**154.27**	**136.04**	**214.72**
0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95
2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
20.72	20.72	20.72	20.72	20.72	20.72	20.72	20.72	20.72	27.02	27.02	27.02	27.02	20.72	20.72
1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31
6.73	6.73	6.73	6.73	6.73	6.73	6.73	6.73	6.73	8.78	8.78	8.78	8.78	6.73	6.73
0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
23.88	23.88	23.88	23.88	23.88	23.88	23.88	23.88	23.88	23.88	23.88	23.88	23.88	23.88	23.88
62.24	**62.24**	**62.24**	**62.24**	**62.24**	**62.24**	**62.24**	**62.24**	**62.24**	**70.59**	**70.59**	**70.59**	**70.59**	**62.24**	**62.24**
188.88	**175.50**	**262.57**	**211.05**	**214.62**	**213.60**	**205.29**	**210.91**	**205.64**	**242.44**	**226.51**	**214.76**	**224.86**	**198.28**	**276.96**
65.15	65.15	65.15												
254.03	**240.65**	**327.72**	**211.05**	**214.62**	**213.60**	**205.29**	**210.91**	**205.64**	**242.44**	**226.51**	**214.76**	**224.86**	**198.28**	**276.96**
44.96	**156.36**	**195.77**	**103.59**	**148.97**	**143.08**	**160.97**	**155.53**	**39.01**	**170.58**	**148.88**	**171.18**	**198.18**	**151.24**	**204.08**
-59.73	**51.67**	**91.08**	**41.35**	**86.73**	**80.84**	**98.73**	**93.29**	**-23.23**	**99.99**	**78.29**	**100.59**	**127.59**	**89.00**	**141.84**
51.50	**10.79**	**18.59**	**20.81**	**20.73**	**22.26**	**26.49**	**33.04**	**49.45**	**716.04**	**779.60**	**16.96**	**16.24**	**10.80**	**17.89**
87.60	**19.10**	**27.31**	**29.52**	**29.20**	**31.41**	**38.02**	**46.87**	**70.91**	**1010.17**	**1132.55**	**25.27**	**23.67**	**15.74**	**23.08**
2.23	**5.86**	**6.39**	**4.22**	**3.72**	**3.50**	**2.54**	**2.20**	**2.28**	**0.12**	**0.10**	**3.89**	**4.16**	**5.97**	**6.15**
3.79	**10.37**	**9.39**	**5.98**	**5.23**	**4.93**	**3.65**	**3.12**	**3.27**	**0.17**	**0.15**	**5.79**	**6.06**	**8.70**	**7.94**

BLACK SOIL ZONE 2013

1. Seed price and seeding rate:

	Rate	Price
Spring Wheat	1.6 bu./ac	$10.50/bu.
CPS Wheat	1.6 bu./ac	$10.00/bu.
Malt Barley	2.25 bu./ac.	$7.00/bu.
Feed Barley	2.25 bu./ac	$6.75/bu.
Oats	3.0 bu./ac	$5.00/bu.
Large Green Lentils	80 lb./ac.	$0.26/lb.
Red Lentils	45 lb./ac/	$0.32/lb.
Edible Yellow Peas	3.0 bu./ac	$11.00/bu.
Edible Green Peas	3.0 bu./ac.	$14.30/bu.
Flax	35 lb./ac.	$18.00/bu.
HT Canola	5 lb./ac	$11.50/lb.

2. Fertilizer:

Fallow Crops:

	lb./ac.		
	N	P	S
Spring Wheat	40	30	0
CPS Wheat	40	30	0
Malt Barley	35	30	0
Feed Barley	45	30	0
Oats	40	30	0
Flax	30	15	0
HT Canola	40	30	20

Stubble Crops:

	lb./ac.		
	N	P	S
Spring Wheat	70	30	0
CPS Wheat	70	30	0
Malt Barley	65	30	0
Feed Barley	75	30	0
Oats	70	30	0
Large Green Lentils	6	20	0
Red Lentils	6	20	0
Feed Peas	6	20	0
Edible Green Peas	6	20	0
Flax	65	20	0
HT Canola	70	30	20

		Fallow Seeded Crops			
	Chem Fallow	Spring Wheat	CPS Wheat	Malt Barley	Feed Barley
REVENUE PER ACRE					
Estimated Yield (bu./ac.,lb./ac.) (A)		41.8	52.0	63.0	75.6
Estimated on Farm Market Price/bu.,lb. (B)		7.15	6.80	5.40	4.50
Estimated Gross Revenue/ac (AxB)=(C)		**298.87**	**353.60**	**340.20**	**340.20**
EXPENSES PER ACRE					
Variable Expenses/acre					
Seed		16.80	16.00	15.75	15.19
Fertilizer - Nitrogen		24.00	24.00	21.00	27.00
- Phosphorus		15.00	15.00	15.00	15.00
- Sulphur and Other		0.00	0.00	0.00	0.00
Chemical - Herbicides	11.74	16.23	16.23	14.37	14.37
- Insecticides/Fungicides	0.00	3.06	3.06	0.00	0.00
- Seed Treatments/Innoculants	0.00	4.60	4.60	5.16	5.16
Machinery Operating - Fuel	2.00	17.00	17.00	17.00	17.00
- Repair	2.14	7.15	7.15	7.15	7.15
Custom Work and Hired Labour	0.00	18.25	18.25	16.25	16.25
Crop Insurance Premium	0.00	9.90	15.22	10.96	10.96
Utilities and Miscellaneous	5.99	5.99	5.99	5.99	5.99
Interest on Variable Expenses	1.38	2.90	2.99	2.70	2.82
Total Variable Expenses (D)	**23.25**	**140.88**	**145.49**	**131.33**	**136.89**
Other Expenses/acre					
Building Repair	0.70	0.70	0.70	0.70	0.70
Property Taxes	6.67	6.67	6.67	6.67	6.67
Business Overhead	2.77	2.77	2.77	2.77	2.77
Machinery Depreciation	7.14	23.85	23.85	23.85	23.85
Building Depreciation	1.74	1.74	1.74	1.74	1.74
Machinery Investment	2.32	7.75	7.75	7.75	7.75
Building Investment	1.04	1.04	1.04	1.04	1.04
Land Investment	26.35	26.35	26.35	26.35	26.35
Total Other Expenses (E)	**48.73**	**70.87**	**70.87**	**70.87**	**70.87**
Labour & Management (F)					
Total Expenses (D+E+F)=(G)	**71.98**	**211.75**	**216.36**	**202.20**	**207.76**
Summer Fallow Expense (H)		71.98	71.98	71.98	71.98
Total Rotation Expense (G+H)=(I)		**283.73**	**288.34**	**274.18**	**279.74**
RETURNS PER ACRE*					
Return over Variable Expenses (C-D)		**134.74**	**184.86**	**185.62**	**180.06**
Return over Total Rotation Expenses (C-I)		**15.14**	**65.26**	**66.02**	**60.46**
BREAK-EVEN YIELD PER ACRE*					
To Cover Variable Expenses		**22.96**	**24.81**	**28.63**	**35.59**
To Cover Total Rotation Expenses		**39.68**	**42.40**	**50.77**	**62.16**
BREAK-EVEN PRICE PER BU./LB.*					
To Cover Variable Expenses		**3.93**	**3.25**	**2.45**	**2.12**
To Cover Total Rotation Expenses		**6.79**	**5.55**	**4.35**	**3.70**

*Returns per acre, break-even yields and prices for fallow seeded crops must include the previous year's fallow expenses. For simplicity, we used 2013 (i.e forecast) chem fallow values.

			Stubble Seeded Crops									
Oats	Flax	Canola	Spring Wheat	CPS Wheat	Malt Barley	Feed Barley	Oats	Large Green Lentil	Red Lentil	Edible Yellow Peas	Edible Green Pea	Flax	Canola
83.6	23.8	37.8	41.8	52.0	63.0	75.6	83.6	1191.2	1260.8	36.9	36.9	23.1	37.8
2.90	12.60	12.00	7.15	6.80	5.40	4.50	2.90	0.24	0.20	8.50	9.50	12.60	12.00
242.44	**299.88**	**453.60**	**298.87**	**353.60**	**340.20**	**340.20**	**242.44**	**285.89**	**252.16**	**313.65**	**350.55**	**291.06**	**453.60**
15.00	11.25	57.50	16.80	16.00	15.75	15.19	15.00	20.80	14.40	33.00	42.90	11.25	57.50
24.00	18.00	24.00	42.00	42.00	39.00	45.00	42.00	3.60	3.60	3.60	3.60	39.00	42.00
15.00	7.50	15.00	15.00	15.00	15.00	15.00	15.00	10.00	10.00	10.00	10.00	10.00	15.00
0.00	0.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.00
8.41	12.14	23.04	18.23	18.23	16.37	16.37	10.41	31.00	31.00	21.33	21.33	14.14	19.13
0.00	0.00	1.54	3.06	3.06	0.00	0.00	0.00	17.66	17.66	0.60	0.60	0.00	1.54
4.28	2.33	0.00	4.60	4.60	5.16	5.16	4.28	11.58	9.41	12.45	12.45	2.33	0.00
17.00	17.00	18.00	17.00	17.00	17.00	17.00	17.00	19.00	19.00	19.00	19.00	17.00	18.00
7.15	9.54	7.15	7.15	7.15	7.15	7.15	7.15	12.06	12.06	12.06	12.06	9.54	7.15
16.25	16.25	16.25	18.25	18.25	16.25	16.25	16.25	18.00	18.00	15.50	15.50	16.25	16.25
12.79	17.48	21.71	9.90	15.22	10.96	10.96	12.79	21.63	18.75	13.76	13.76	17.04	21.71
5.99	5.99	5.99	5.99	5.99	5.99	5.99	5.99	5.99	5.99	5.99	5.99	5.99	5.99
2.64	2.47	4.16	3.32	3.41	3.12	3.24	3.06	3.60	3.36	3.09	3.30	2.99	4.46
128.51	**119.95**	**202.34**	**161.30**	**165.91**	**151.75**	**157.31**	**148.93**	**174.92**	**163.23**	**150.38**	**160.49**	**145.53**	**216.73**
0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
6.67	6.67	6.67	6.67	6.67	6.67	6.67	6.67	6.67	6.67	6.67	6.67	6.67	6.67
2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77
23.85	23.85	23.85	23.85	23.85	23.85	23.85	23.85	30.15	30.15	30.15	30.15	23.85	23.85
1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74
7.75	7.75	7.75	7.75	7.75	7.75	7.75	7.75	9.80	9.80	9.80	9.80	7.75	7.75
1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
26.35	26.35	26.35	26.35	26.35	26.35	26.35	26.35	26.35	26.35	26.35	26.35	26.35	26.35
70.87	**70.87**	**70.87**	**70.87**	**70.87**	**70.87**	**70.87**	**70.87**	**79.22**	**79.22**	**79.22**	**79.22**	**70.87**	**70.87**
199.38	**190.82**	**273.21**	**232.17**	**236.78**	**222.62**	**228.18**	**219.80**	**254.14**	**242.45**	**229.60**	**239.71**	**216.40**	**287.60**
71.98	71.98	71.98											
271.36	**262.80**	**345.19**	**232.17**	**236.78**	**222.62**	**228.18**	**219.80**	**254.14**	**242.45**	**229.60**	**239.71**	**216.40**	**287.60**
90.68	**156.68**	**228.01**	**137.57**	**187.69**	**188.45**	**182.89**	**93.51**	**110.97**	**88.93**	**163.27**	**190.06**	**145.53**	**236.87**
-28.92	**37.08**	**108.41**	**66.70**	**116.82**	**117.58**	**112.02**	**22.64**	**31.75**	**9.71**	**84.05**	**110.84**	**74.66**	**166.00**
52.33	**11.37**	**18.80**	**22.56**	**24.40**	**28.10**	**34.96**	**51.36**	**728.83**	**816.15**	**17.69**	**16.89**	**11.55**	**18.06**
93.57	**20.86**	**28.77**	**32.47**	**34.82**	**41.23**	**50.71**	**75.79**	**1058.92**	**1212.25**	**27.01**	**25.23**	**17.17**	**23.97**
1.82	**6.02**	**5.97**	**3.86**	**3.19**	**2.41**	**2.08**	**1.78**	**0.15**	**0.13**	**4.08**	**4.35**	**6.30**	**5.73**
3.25	**11.04**	**9.13**	**5.55**	**4.55**	**3.53**	**3.02**	**2.63**	**0.21**	**0.19**	**6.22**	**6.50**	**9.37**	**7.61**

SPECIALTY CROPS 2013

1. Seed price and seeding rate:

	Soil zone	Rate	Price
Buckwheat	Dk Brown	50 lb./ac	$0.25/lb.
Camelina	Brown	5 lb./ac.	$1.50/lb.
Canaryseed	Dk Brown	35 lb./ac.	$0.37/lb.
Caraway	Black	10 lb./ac.	$0.92/lb.
Desi Chickpea	Brown	95 lb./ac.	$0.38/lb.
Kabuli Chickpea (9 mm)	Brown	150 lb./ac.	$0.46/lb.
Kabuli Chickpea (7 mm)	Brown	110 lb./ac.	$0.32/lb.
Corriander	Dk Brown	25 lb./ac.	$0.46/lb.
Dill	Black	8 lb./ac.	$0.75/lb.
Fababean	Black	180 lb./ac.	$0.20/lb.
Fenugreek	Brown	30 lb./ac.	$0.40/lb.
Yellow Mustard	Brown	10 lb./ac.	$1.80/lb.
Oriental Mustard	Brown	8 lb./ac.	$1.70/lb.
Brown Mustard	Brown	8 lb./ac.	$1.75/lb.
Pinto Bean	Dk Brown	100 lb./ac.	$0.75/lb.
Sunflower (LMTS)	Dk Brown	5 lb./ac.	$3.50/lb.
Sunflower (EMSS)	Dk Brown	7 lb./ac.	$5.00/lb.
Winter Wheat	Black	2.0 bu./ac.	$10.00/bu.

4. Fertilizer:

	lb./ac.		
	N	P	S
Buckwheat	25	20	0
Camelina	50	20	10
Canaryseed	35	30	0
Caraway	100	20	0
Desi Chickpea	6	20	0
Kabuli Chickpea (9 mm)	6	20	0
Kabuli Chickpea (7 mm)	6	20	0
Corriander	35	20	0
Dill	30	20	0
Fababean	6	30	0
Fenugreek	6	20	0
Yellow Mustard	45	20	10
Oriental Mustard	45	20	10
Brown Mustard	45	20	10
Pinto Bean	50	25	0
Sunflower (LMTS)	50	20	0
Sunflower (EMSS)	50	20	0
Winter Wheat	75	30	0

CROP	Buckwheat	Camelina	Canary Seed	Caraway**	#1 Desi Chickpea
Type of Rotation	Fallow****	Fallow****	Re-crop	Re-crop	Re-crop
Rotation Years Required to Grow this Crop	2	2	1	3	1
Soil Zone	DBrown	Brown	DBrown	Black	Brown
REVENUE PER ACRE					
Estimated Yield (bu./ac.,lb./ac.) (A)	610.0	1250.0	1107.6	1128.0	1147.6
Estimated On Farm Market Price/bus.,lb. (B)	0.29	0.13	0.27	0.57	0.27
Estimated Gross Revenue/ac (AxB)=(C)	**176.90**	**162.50**	**299.05**	**642.96**	**309.85**
EXPENSES PER ACRE					
Variable Expenses/acre					
Seed	12.50	7.50	12.95	9.20	36.10
Fertilizer - Nitrogen	15.00	30.00	21.00	60.00	3.60
- Phosphorus	10.00	10.00	15.00	10.00	10.00
- Sulphur and Other	0.00	4.00	0.00	0.00	0.00
Chemical*** - Herbicides/Fungicides	7.13	8.59	11.85	35.69	32.99
- Insecticides	0.00	0.00	3.17	0.00	0.00
- Seed Treatment/Innoculant	2.50	0.00	0.00	0.50	10.86
Machinery Operating - Fuel	19.00	21.00	20.00	40.00	22.00
- Repair	6.22	5.35	6.22	15.25	9.44
Custom Work and Hired Labour	15.00	15.50	17.25	15.00	15.00
Crop Insurance Premium	0.00	6.06	16.93	36.49	33.09
Utilities and Miscellaneous	5.88	5.47	5.88	11.98	5.47
Interest on Variable Expenses	1.96	2.38	2.74	13.12	3.75
Total Variable Expenses (D)	**95.19**	**115.85**	**132.99**	**247.23**	**182.30**
Other Expenses/acre					
Building Repair	0.52	0.39	0.52	1.40	0.39
Property Taxes	5.95	5.27	5.95	13.34	5.27
Business Overhead	2.32	1.52	2.35	5.54	1.54
Machinery Depreciation	20.72	17.83	20.72	50.84	23.60
Building Depreciation	1.31	0.98	1.31	3.48	0.98
Machinery Investment	6.73	5.79	6.73	16.52	7.67
Building Investment	0.78	0.59	0.78	2.08	0.59
Land Investment	22.79	18.79	23.88	26.35	19.69
Total Other Expenses (E)	**61.12**	**51.16**	**62.24**	**119.55**	**59.73**
Labour and Management (F)					
Total Expenses (D+E+F)=(G)	**156.31**	**167.01**	**195.23**	**366.78**	**242.03**
Summerfallow Cost (H)	65.15	55.83	0.00	0.00	0.00
Total Rotation Expense (G+H)=(I)	**221.46**	**222.84**	**195.23**	**366.78**	**242.03**
RETURNS PER ACRE					
Return Over Variable Expenses (C-D)	**59.01**	**24.89**	**166.06**	**395.73**	**127.55**
Return Over Total Rotation Expenses (C-I)	**-44.56**	**-60.34**	**103.82**	**276.18**	**67.82**
BREAK-EVEN YIELD PER ACRE					
To Cover Variable Expenses	**406.52**	**912.91**	**492.56**	**216.87**	**675.19**
To Cover Total Rotation Expenses	**763.66**	**1714.15**	**723.07**	**321.74**	**896.41**
BREAK-EVEN PRICE PER BU./LB.					
To Cover Variable Expenses	**0.19**	**0.11**	**0.12**	**0.11**	**0.16**
To Cover Total Rotation Expenses	**0.36**	**0.18**	**0.18**	**0.16**	**0.21**

* Yield and costs are for Dryland Pinto Beans only.

**Expenses shown are from two years (year 1 and 2) and revenue is from two years (year 2 and 3) of Caraway seed production. To obtain the average return per acre per year, the figures per acre year should be divided by 2. For example, the return over total rotational expenses is $276.18 divided by 2 equals $138.09 per year. The expenses associated with the cover crop in year 1 are covered by the revenue from the cover crop.

*** Only registered chemicals are included.

****The variable cost of the fallow portion of the rotation are included in the Return Over Variable Expenses Calculation, the Break-Even Yield to Cover Variable Expenses Calculation, and the Break-Even Price to Cover Variable Expenses Calculation, according to the relevant Soil Zone.

#1-9mm Kabuli Chickpea	#1-7mm Kabuli Chickpea	Coriander	Dill	Fababean (Feed)	Fenugreek	Yellow Mustard	Oriental Mustard	Brown Mustard	Pinto Bean*	Sunflower (LMTS)	Sunflower (EMSS)	Winter Wheat
Re-crop	Re-crop	Re-crop	Fallow****	Re-crop	Fallow****	Re-crop	Re-crop	Re-crop	Fallow****	Re-crop	Re-crop	Re-crop
1	1	1	2	1	2	1	1	1	2	1	1	1
Brown	Brown	DBrown	Black	Black	Brown	Brown	Brown	Brown	DBrown	DBrown	DBrown	Black
1284.0	1386.0	786.0	800.0	1341.2	900.0	711.0	819.0	801.0	1000.0	1297.8	1256.4	58.2
0.35	0.27	0.31	0.45	0.13	0.23	0.37	0.27	0.32	0.35	0.28	0.24	6.70
449.40	**374.22**	**243.66**	**360.00**	**174.36**	**207.00**	**263.07**	**221.13**	**256.32**	**350.00**	**363.38**	**301.54**	**389.94**
69.00	35.20	11.50	6.00	36.00	12.00	18.00	13.60	14.00	75.00	17.50	35.00	20.00
3.60	3.60	21.00	18.00	3.60	3.60	27.00	27.00	27.00	30.00	30.00	30.00	45.00
10.00	10.00	10.00	10.00	15.00	10.00	10.00	10.00	10.00	12.50	10.00	10.00	15.00
0.00	0.00	0.00	0.00	0.00	0.00	4.00	4.00	4.00	0.00	0.00	0.00	0.00
53.45	32.99	43.03	19.63	32.43	17.13	11.32	11.32	11.32	59.66	31.51	31.51	9.30
0.00	0.00	0.00	0.00	0.00	0.00	1.54	1.54	1.54	0.00	1.34	1.34	0.00
24.90	20.19	1.25	0.00	20.70	2.70	0.00	0.00	0.00	25.00	0.45	0.63	5.75
22.00	22.00	20.00	17.00	22.00	17.00	21.00	21.00	21.00	19.00	22.00	22.00	14.00
9.44	9.44	7.16	7.15	9.54	5.82	5.35	5.35	5.35	10.81	9.55	9.13	7.15
15.00	15.00	15.00	15.00	15.00	15.00	15.50	15.50	15.50	15.00	16.00	16.00	15.00
53.69	42.81	18.88	0.00	17.77	0.00	17.20	12.43	14.26	0.00	32.21	31.15	13.76
5.47	5.47	5.88	5.99	5.99	5.47	5.47	5.47	5.47	5.88	5.88	5.88	5.99
5.60	4.13	3.23	2.07	3.74	1.86	2.86	2.67	2.72	5.31	3.71	4.05	5.81
272.15	**200.83**	**156.93**	**100.84**	**181.77**	**90.58**	**139.24**	**129.88**	**132.16**	**258.16**	**180.15**	**196.69**	**156.76**
0.39	0.39	0.52	0.70	0.70	0.39	0.39	0.39	0.39	0.52	1.31	0.52	0.70
5.27	5.27	5.95	6.67	6.67	5.27	5.27	5.27	5.27	5.95	5.95	5.95	6.67
1.54	1.54	2.35	2.77	2.77	1.54	1.54	1.54	1.54	2.35	2.35	2.35	2.77
23.60	23.60	23.87	23.85	23.85	19.40	17.83	17.83	17.83	27.02	23.87	22.82	23.85
0.98	0.98	1.31	1.74	1.74	0.98	0.98	0.98	0.98	1.31	1.31	1.31	1.74
7.67	7.67	7.76	7.75	7.75	6.31	5.79	5.79	5.79	8.78	7.76	7.42	7.75
0.59	0.59	0.78	1.04	1.04	0.59	0.59	0.59	0.59	0.78	0.78	0.78	1.04
19.69	19.69	23.88	26.35	26.35	19.69	19.69	19.69	19.69	23.88	23.88	23.88	26.35
59.73	**59.73**	**66.42**	**70.87**	**70.87**	**54.17**	**52.08**	**52.08**	**52.08**	**70.59**	**67.21**	**65.03**	**70.87**
331.88	**260.56**	**223.35**	**171.71**	**252.64**	**144.75**	**191.32**	**181.96**	**184.24**	**328.75**	**247.36**	**261.72**	**227.63**
0.00	0.00	0.00	71.98	0.00	55.83	0.00	0.00	0.00	65.15	0.00	0.00	0.00
331.88	**260.56**	**223.35**	**243.69**	**252.64**	**200.58**	**191.32**	**181.96**	**184.24**	**393.90**	**247.36**	**261.72**	**227.63**
177.25	**173.39**	**86.73**	**235.91**	**-7.41**	**94.66**	**123.83**	**91.25**	**124.16**	**69.14**	**183.23**	**104.85**	**233.18**
117.52	**113.66**	**20.31**	**116.31**	**-78.28**	**6.42**	**71.75**	**39.17**	**72.08**	**-43.90**	**116.02**	**39.82**	**162.31**
777.57	**743.81**	**506.23**	**275.76**	**1398.23**	**488.43**	**376.32**	**481.04**	**413.00**	**802.46**	**643.39**	**819.54**	**23.40**
948.23	**965.04**	**720.48**	**541.53**	**1943.38**	**872.09**	**517.08**	**673.93**	**575.75**	**1125.43**	**883.43**	**1090.50**	**33.97**
0.21	**0.14**	**0.20**	**0.16**	**0.14**	**0.12**	**0.20**	**0.16**	**0.16**	**0.28**	**0.14**	**0.16**	**2.69**
0.26	**0.19**	**0.28**	**0.30**	**0.19**	**0.22**	**0.27**	**0.22**	**0.23**	**0.39**	**0.19**	**0.21**	**3.91**

SPECIALTY CROP AGRONOMIC INFORMATION 2013 CROP

Crop	Type	lb/bu	Adaptation	Seed Rate (lb/ac)	Est. Seeds per lb	Weed Control	Crop Height (inches)
Buckwheat	Annual grain	48	Widely adapted but sensitive to frost anytime and heat and drought during seed set.	35 - 55	13,000 - 16,000	Several herbicides registered for grassy weed control.	40 - 60
Camelina	Annual oilseed	50	Well adapted to Saskatchewan conditions. It is highly tolerant of heat and drought, cold tolerant, matures early, very suitable for warm and dry regions.	5	300,000	Assure II herbicide (quizalofop-P ethyl) is registered under the User Requested Minor-Use Label Expansion Program. The most effective weed control is to seed early and seed into a clean field.	35
Canaryseed	Annual birdseed	50	Moderate moisture requirements, shallow rooted.	22 - 35	65,000	Several herbicides registered.	40 - 60
Caraway	Biennial spice	35	Widely adapted, yields best under moderate moisture.	10	90,000	Several herbicides are registered.	12 - 28
Desi Chickpea	Annual pulse	60	Indeterminate crop, Brown and Dark Brown soils.	80 - 90	1,350 - 2,300	Several registered herbicides.	12 - 20
Kabuli Chickpea 9mm	Annual pulse	60	Indeterminate crop, Brown soils. Seed after soil reaches 10°C at seeding depth.	120 - 180	1,100 - 2,000	Several registered herbicides.	14 - 20
Kabuli Chickpea 7mm	Annual pulse	60	Indeterminate crop, Brown soils. Seed after soil reaches 10°C at seeding depth.	100 - 110	1,200 - 2,200	Several registered herbicides.	14 - 20
Coriander	Annual spice	22	Heat loving, late maturing.	25	50,000	Several herbicides are registered.	24 - 40
Dill	Annual spice	27	Highest yield in cool conditions, moderate moisture.	5 - 9	90,000	Equinox, Lorox and Edge are registered herbicides.	40
Fababean	Annual pulse	60	High moisture areas or irrigation.	120 - 180	800 - 1,350	Several herbicides registered.	40 - 60
Fenugreek	Annual legume	60	Indeterminate crop, Brown and Dark Brown soil zones. Late maturing.	22 - 30	23,000 - 27,000	Odyssey, Select and Centurion herbicides are registered. Use clean fields.	12 - 24
Yellow Mustard	Annual oilseed	50	Better seed quality in drier areas.	9 - 12	100,000	Several registered herbicides.	30 - 40
Brown Mustard	Annual oilseed	50	More heat and drought tolerant than canola.	7 - 10	200,000	Several registered herbicides.	40 - 48
Oriental Mustard	Annual oilseed	50	More heat and drought tolerant than canola.	5 – 9	200,000	Several registered herbicides.	40 - 48
Pinto Bean narrow row and dry land	Annual pulse	60	Heat and moisture loving. Seed in late May. No frost tolerance.	80 - 140	1,100 - 1,600	Several registered herbicides. Seed treatment recommended.	12 - 20
Standard Sunflower	Annual oilseed	30	High heat requirements, South-east Saskatchewan.	5	4,500 - 6,800	Trifluralin, Edge and Select are registered herbicides.	60
Early Short Statured Sunflower	Annual oilseed	30	Moderate heat requirements. Brown, Dark Brown and Thin Black soils.	7 - 10	11,000 - 13,500	Trifluralin, Edge and Select are registered herbicides.	24 - 35
Winter Wheat	Winter Annual	60	High yield potential with adequate moisture and nutrients. Needs snow cover for winter survival. Seeding date and depth critical.	90 - 120	12,000 - 14,000	Fall or early spring application for broad leaf weed control.	30 - 40

Days to Maturity	Harvest Method	Safe Storage Moisture	Crop Quality Factors	Markets	Expected Yield Range (lb/ac)
80 - 90	Swath when 75 per cent mature.	< 16%	Tan coloured seed, do not mix old (reddish-brown dehulled) and new (greenish dehulled) crop.	Human food	550 - 700
85 - 100	Direct combine or swath and combine. Direct combining is recommended due to potential damage from wind and because shattering losses are minimal. If swathing is necessary, it should be done when 75 per cent of the crop has turned yellow.	< 8%	Orange/brown seeds borne in pear shaped capsules.	Industrial oil	1,000 –1,500
95 - 105	Swath and combine or direct combine. Shatter resistant.	< 13%	Avoid dehulling the seed.	Birdseed	700 - 1,050
Biennial, matures in early August	Swath when approximately 75 per cent of seeds have turned brown.	< 10%	Brown with dark stripes. Avoid green seed.	Flavouring	450 - 700
110 - 120	Direct combine or swath and combine.	< 14%	Sound whole seed, avoid seed damage.	Human food	1,050 - 1,450
110 - 125	Direct combine or swath and combine.	< 14%	Sound whole seed, avoid seed damage. Light coloured seed coat, green seed.	Human food	900 - 1,300
110 - 120	Direct combine or swath and combine.	< 14%	Sound whole seed, avoid seed damage. Light coloured seed coat, green seed.	Human food	1,000 - 1,400
95 - 110	Direct combine or swath then immediately combine.	< 10%	Fully mature brown seeds, splits below 5 per cent.	Flavourings and perfumes	550 - 800
105 - 115	Swath and combine.	< 10%	Clean seed, oil content.	Flavouring	270 - 1,000
110 - 120	Swath and combine.	< 16%	Avoid splitting and cracking.	High protein feed	1,000 - 1,600
115 - 130	Resists shattering, direct combine or swath and combine.	< 12%	Golden coloured seed.	Spice ingredient, pharmaceutical, health food	550 - 900
90 - 93	Direct combine or swath and combine.	< 9.5%	Bright yellow seed.	Condiment	550 - 700
91 - 94	Swath and combine.	< 9.5%	Dark reddish brown seed.	Condiment	620 - 900
91 - 93	Swath and combine.	< 9.5%	Bright golden seed.	Condiment	620 - 900
95 - 112	Pick-up reel and floating cutter bar required. Swathing preferred. Swath when tough.	14 - 16%	Sound whole seed, avoid seed damage.	Human food	800 - 1,500 Dry land
110 - 125	Direct combine with sunflower attachment.	< 10%	Premiums for high oil content.	Edible oil and confection	700 - 1,000
99 - 103	Swath and combine or direct combine with standard equipment.	< 10%	Premiums for high oil content.	Edible oil and birdseed	700 - 1,000
210 - 225 days after January 1st	Direct combine or swath and combine. Sprouts easily in the swath.	< 14%	Adequate nitrogen is needed to meet yield and protein potential.	Feed, food and ethanol	2,100 - 3,600

CROP PRODUCTION COSTS ($/ACRE) MY FARM	USE THIS WORKSHEET TO ADJUST THE CROP BUDGETS TO YOUR FARM COSTS			
REVENUE PER ACRE				
A Estimated yield (bu./ac.; lb./ac.)				
B Estimated on-farm market price per bushel or per pound				
C Estimated Gross Revenue per acre				
EXPENSES PER ACRE				
Variable Expenses per acre				
Seed				
Fertilizer: Nitrogen				
Phosphorus				
Sulphur and Other				
Chemical: Herbicides/Fungicides				
Insecticides				
Seed Treatment/Innoculant				
Machinery Operating: Fuel				
Repair				
Custom Work and Hired Labour				
Crop Insurance Premium				
Utilities and Miscellaneous				
Interest on Variable Expenses				
D Total Variable Expenses per acre				
Other Expenses per acre				
Building Repair				
Property Taxes				
Business Overhead				
Machinery Depreciation				
Building Depreciation				
Machinery Investment				
Building Investment				
Land Investment				
E Total Other Expenses				
F Labour and Management*				
G Total Expenses per acre (D+E+F)				
H Summerfallow cost				
I Total Rotation Expense (G+H)				
RETURNS PER ACRE				
Return over Variable Expenses (C-D)				
Return over Total Rotational Expenses (C-I)				
BREAK-EVEN YIELD PER ACRE (lb./ac. or bu./ac.)**				
To Cover Variable Expenses				
To Cover Total Rotation Expenses				
BREAK-EVEN PRICE (per bushel or per pound)**				
To Cover Variable Expenses				
To Cover Total Rotation Expenses				

* These budgets do not include an estimate for owner/operator labour and management. Farm managers need to determine their own actual labour and management costs and add it to total expenses.

** The break-even yields and prices for summerfallow crops should include the previous year's tillage fallow expenses.

2013 CROP ROTATION WORKSHEET

There is value in looking at the effect of rotations on your long-term profitability. This tool looks at the net returns per rotation acre. The example shown here is based on estimates from the Dark Brown soil zone. The actual costs and returns should be based on your own projections. Show the complete rotation from the first year to the last year.

This worksheet shows both 'returns over total expenses' and 'returns over variable expenses'. Note that in year 1, the summerfallow costs are included in 'canola on fallow'.

Crop Rotation Returns

	Example 1: Dark Brown Soil Zone			Rotation 1			Rotation 2			Rotation 3		
	Crop	Return over Total Expenses $/acre	Return over Variable Expenses $/acre	Crop	Return over Total Expenses $/acre	Return over Variable Expenses $/acre	Crop	Return over Total Expenses $/acre	Return over Variable Expenses $/acre	Crop	Return over Total Expenses $/acre	Return over Variable Expenses $/acre
Year 1	Chem Fallow	Included below	Included below									
Year 2	Canola on Fallow	$91.08	$195.77									
Year 3	Spring Wheat Direct-Seeded	$41.35	$103.59									
Year 4	Red Lentil Direct-Seeded	$78.29	$148.88									
Year 5	Malt Barley Direct-Seeded	$98.73	$160.97									
Year 6												
Total Returns		$309.45	$609.21									
Number years in rotation		5	5									
Return per rotation acre		$61.89	$121.84									

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